

**Testimony to the House Committee on Energy and Commerce,
Subcommittee on Commerce, Trade, and Consumer Protection,
and the
Subcommittee on Communications, Technology, and the Internet**

For the hearing on
Behavioral Advertising: Industry Practices And Consumers' Expectations
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Summary of Testimony

Powerful techniques of data collection, analysis, consumer profiling and tracking, and interactive ad targeting have emerged across the online venues Americans increasingly rely on for news, information, entertainment, health, and financial services. Whether using a search engine, watching an online video, creating content on a social network, receiving an email, or playing an interactive video game, we are being digitally shadowed online. Our travels through the digital media are being monitored, and digital dossiers on us are being created—and even bought and sold. Behavioral Targeting is expected to become more widely used with online video, mobile phones, and online games and social networks, further expanding its data collection and targeting role. Such consumer profiling and targeted advertising takes place largely without our knowledge or consent, and affects such sensitive areas as financial transactions and health-related inquiries. Children and youth, among the most active users of the Internet and mobile devices, are especially at risk in this new media-marketing ecosystem.

Industry self-regulation, it is clear, has failed to offer meaningful protections to consumer privacy. So-called “Notice and Choice,” which has been the foundation of the self-regulatory regime, has done nothing to stem the tide of increasing data collection and use—all without the genuinely informed understanding and consent of users. As with our financial system, privacy and consumer protection regulators have failed to keep abreast of developments in the area they are supposed to oversee. In order to ensure adequate trust in online marketing—an important and growing sector of our economy—Congress must enact sensible policies to protect consumers.

The foundation for a new law should be implementing Fair Information Practices for the digital marketing environment. Americans shouldn't have

to trade away their privacy and accept online profiling and tracking as the price they must pay in order to access the Internet and other digital media.

Chairman Boucher, Chairman Rush, Congressman Barton, Congressman Stearns, Congressman Radanovich, and Members of the Subcommittees, I am Jeff Chester, executive director of the Center for Digital Democracy (CDD). CDD is a non-partisan and not-for-profit organization based in Washington, D.C. Its mission is to help educate the public about the privacy, consumer protection, public health and competition issues related to the new digital media marketplace. CDD, along with our partner USPIRG, the federation of state Public Interest Research Groups, has played a major role at the Federal Trade Commission on data privacy and online marketing/consumer protection issues. In a series of complaints filed at the FTC in 2006, 2007 and earlier this year, CDD and U.S. PIRG pushed the commission to address the growing threats to consumer privacy and welfare that have emerged as a consequence of many online marketing practices, especially behavioral targeting.¹ I have worked on interactive marketing and consumer protection issues for more than a decade. As executive director of the Center for Media Education during the 1990's, I played a key role—along with Professor Kathryn C. Montgomery of American University—promoting privacy safeguards for children. That work eventually led to the passage, on a bi-partisan basis, of the Children's Online Privacy Protection Act of 1998 (COPPA).²

I want to commend the leadership of both committees, on both sides of the aisle, for their strong interest in ensuring U.S. consumers receive all the benefits of the digital age without having both their privacy and consumer welfare placed at risk. As I will explain in my testimony today, we are at a critical moment. Powerful techniques of data collection, analysis, consumer profiling and tracking, interactive ad creation

¹ Center for Digital Democracy and U.S. PIRG. Complaint and Request for Inquiry and Injunctive Relief Concerning Unfair and Deceptive Online Marketing Practices. Federal Trade Commission Filing. November 1, 2006 [Online]. Available at: <http://www.democraticmedia.org/files/pdf/FTCadprivacy.pdf>. Accessed March 26, 2009. Center for Digital Democracy and U.S. PIRG, "Supplemental Statement In Support of Complaint and Request for Inquiry and Injunctive Relief Concerning Unfair and Deceptive Online Marketing Practices," Federal Trade Commission Filing, 1 Nov. 2007, http://www.democraticmedia.org/files/FTCSupplemental_statement1107.pdf. Center for Digital Democracy and U.S. PIRG. Complaint and Request for Inquiry and Injunctive Relief Concerning Unfair and Deceptive Mobile Marketing Practices. Federal Trade Commission Filing. January 13, 2009 [Online]. Available at: http://www.democraticmedia.org/current_projects/privacy/analysis/mobile_marketing. Accessed March 23, 2009.

² For a detailed case study of the campaign to pass COPPA, see Chapter 4, "Web of Deception," in Kathryn C. Montgomery, *Generation Digital: Politics, Commerce, and Childhood in the Age of the Internet* (Cambridge, MA: MIT Press, 2007). I have continued to follow online marketing developments closely, including for my book, *Digital Destiny: New Media and the Future of Democracy* (The New Press, 2007).

and targeting have emerged across the online venues Americans increasingly rely on for news, information, entertainment, health, and financial services. Whether using a search engine, watching an online video, creating content on a social network, receiving an email, or playing an interactive video game, we are being digitally shadowed online. Our travels through the digital media are being monitored, and digital dossiers on us are being created—and even bought and sold. As *BusinessWeek* journalist Stephen Baker observed in his recent book, *The Numerati*, in his discussion of the behavioral advertising industry, “Late in the past century, to come up with this level of reporting, the East German government had to enlist tens of thousands of its citizens as spies. Today we spy on ourselves and send electronic updates minute by minute.”³

Online Behavioral Targeting

Americans do not know much about what the industry calls the new “media and marketing ecosystem.” The forms of advertising, marketing and selling that are emerging as part of the new media depart in significant ways from the more familiar commercial advertising and promotion we have seen in television, for example. In today’s digital marketing system, advertising, editorial content, data collection, measurement, and content delivery are increasingly intertwined. As a major advertising industry report on the future of marketing in the digital era explained, “The influx of data into marketing has been one of the biggest changes to players across the landscape.... Advertising strategies, campaigns, and distribution are increasingly based on predictive algorithms, spreadsheets, and math.... Every Web page’s individual views, every word typed in a search query box (also known as the ‘database of consumer intentions’), every video download, and even every word in an e-mail may create one more data point that a marketer can leverage and use to more precisely target the audience....”⁴

Specifically, few U.S. consumers understand the power and intent of behavioral targeting, which, notes *eMarketer*, “segments the audience based on observed and measured data—the pages or sites users visit, the content they view, the search queries they enter, the ads they click on, the information they share on social internet sites and the products they put in online shopping carts. This data is combined with the time, length and frequency of visits.... Behavioral targets people, not pages. That is, behavioral uses the actions of a person to define its target, unlike contextual targeting, which serves ads based on a page’s contents.... Behavioral information can also be merged with visitor demographic data—such as age, gender, and ZIP code.... Whether tracked by cookies or ISPs, the sort of user data

³ Stephen Baker, *The Numerati* (New York: Houghton Mifflin Harcourt, 2008), p. 4.

⁴ Edward Landry, Carolyn Ude, and Christopher Vollmer, “HD Marketing 2010: Sharpening the Conversation,” Booz/Allen/Hamilton, ANA, IAB, AAAA, 2008, http://www.boozallen.com/media/file/HD_Marketing_2010.pdf.

that builds behavioral profiles takes in search queries, Web site visits, specific content consumed (such as clicks or playing a video), product shopping comparisons, product purchases and items placed in shopping carts but not bought.”⁵ U.S. spending for BT online advertising is predicted to grow dramatically to \$4.4 billion by 2012 (up from “only \$775 million in 2008”).⁶

It is urgent, for two critical reasons, that Congress swiftly enact legislation that helps bring the concept of Fair Information Practices up to date in the digital age. First, we must ensure that the freedom of all Americans is protected in the online era. We shouldn’t sanction the creation of a surveillance society where potentially many people—and government—can gain ongoing and comprehensive access to who we are and what we do. Our children and grandchildren, so-called “digital natives,” are incorporating online media into almost everything they do, such as texting friends. We should protect their privacy and ensure we leave a digital civil liberties legacy for future generations.

Second, consumers must be in full control of their personal data, helping empower them as they increasingly rely on the Internet to engage in transactions, including those involving financial products and health concerns. As with the financial sector and a cause of the current economic crisis, regulators responsible for consumer privacy and online transactions have failed to adequately keep up with the directions of the marketplace—placing millions of Americans potentially at risk when engaged with online financial services (such as mortgages and loans). This and other hearings are essential to help inform the public that a whole new world has emerged for consumers: marketing is now fueled by the merging of online and offline databases, purposefully designed “immersive” interactive ad techniques, tracking and profiling users across the Internet, and the growing use of state-of-the-art “neuromarketing” techniques for digital marketing featuring (as Yahoo itself described in April 2009) “brain wave measurement, skin response testing, and eye tracking.”⁷

⁵ David Hallerman, “Behavioral Targeting: Marketing Trends,” *eMarketer*, June 2008, pp. 2, 11. Personal copy.

⁶ Hallerman, “Behavioral Targeting: Marketing Trends,” p. 1.

⁷ Chris Jaffe and Jill Strawbridge, “Measuring Online Ad Effectiveness Using Advanced Research Methods,” Yahoo. Apr. 2009, l.yimg.com/a/i/us/ayc/aa_insights_advrschmeth.pdf. Microsoft, Google’s DoubleClick, and many other digital marketing companies explain that digital marketing is different than traditional advertising, particularly for its ability to offer animation and multimedia-based “immersive” experiences. Such marketing techniques are designed to deeply engage the consumer with the content of the marketing message. See, for example, Microsoft Advertising, “Emotional Side of Digital Advertising,” Oct. 2007, <http://advertising.microsoft.com/uk/Emotional-Side-of-Digital-Adv>; Microsoft Advertising, “Maximize Reach and results through Rich Media,” <http://advertising.microsoft.com/rich-media>; DoubleClick, “DoubleClick Rich Media and Video,” <http://www.doubleclick.com/products/richmedia/index.aspx>; Eyeblander, “About Us,” http://www.eyeblander.com/Content.aspx?page=about_us (all viewed 14 June 2009). Such techniques are tied to data collection as well.

Protecting consumer privacy online is also vital if we are to protect consumers, who have already suffered massive financial losses and other personal hardships as a result of the recent financial debacle (and who face other risks, such as the growth of “ID Theft” and data security leaks). Mortgage loans, credit cards, and other financial products for consumers were—and are—being made available through an online marketing system that is non-transparent, unaccountable to individual users, and unfair. The equation must be balanced: consumer autonomy and privacy that can fairly contend with the tremendous clout online advertisers have today through data collection, profiling and “micro-targeting.”⁸ There is an urgency for action, as the current economic crisis is fostering an even greater reliance on the online medium by consumers. Google recently told advertisers in the United Kingdom that “the slowdown will speed up consumer use of digital technology...and greater use of the Internet.”⁹ We will see increased consumer online activity connected to critical financial transactions—from online shopping, banking, and bill paying to applying for loans and mortgage—that get to the very heart of our economy.¹⁰ If we are to protect consumers from further personal financial loss, Congress should ensure that the online marketing system operates in a transparent and accountable manner.

I want to be clear that our call for privacy and other consumer protection rules related to data collection and online commerce isn’t about undermining the role that advertising and marketing plays in our digital-based economy. Advertising and marketing has and will continue to play a critically vital role for our digital media. Advertising revenues are a crucial source of funding for online content. Marketing online has enabled a “long-tail” of electronic commerce, including from small businesses, to emerge and thrive. We should be proud of the impressive level of technological and business innovation from this sector. My concern about the growing threat to our privacy and related consumer protection issues stems not from the activities of a single—or even several—major companies in this sector. Rather, it is from the overall capability and direction of the online marketing industry when it comes to data collection marketing practices. It is precisely to ensure the growth of online marketing and advertising that consumer privacy must be protected. Consumers and citizens shouldn’t be asked to agree to some form of

⁸ Tom Agan, “Silent Marketing: Micro-targeting,” Penn, Schoen and Berland Associates, www.wpp.com/NR/rdonlyres/4D3A7EB2-9340-4A8D-A435-FDA01DD134D0/0/PSB_SilentMarketing_Mar07.p

⁹ Google, “Speeding Up in the Slowdown,” 2008, personal copy.

¹⁰ “The April 2009 “comScore State of Online Banking” report, for example, “found that the number of online banking customers continued to grow strongly in 2008 despite the turbulent financial environment. The growth was fueled by banks’ aggressive customer acquisition strategies and heightened financial interest among online banking customers wanting to keep a closer eye on their personal finances.” comScore, “Number of U.S. Online Banking Customers Continues to Grow Despite Challenging Financial Environment,” 21 Apr. 2009, http://www.comscore.com/Press_Events/Press_Releases/2009/4/2009_State_of_Online_Banking_Report (viewed 21 May 2009).

trade-off where they lose their privacy and protections in order to see a marketplace financially grow. Without ensuring meaningful policies that will promote consumer trust, online marketing in the U.S. will be undermined by a lack of confidence.

Some in the online ad industry appear to suggest that any legislative attempt to place consumers in charge of their online data would undermine the economic role of the Internet media. But I believe that by legislatively creating a system where consumers can be assured that their data are protected and transactions are structured to further empower them, trust and confidence in our online marketplace will grow and thrive. I firmly believe that we can protect privacy and also see the online marketplace and medium prosper.

Along these lines, I asked Professor Joseph Turow, Ph.D., of the Annenberg School of Communication, University of Pennsylvania—one of the country's leading independent experts on digital marketing—to respond to the alarmist calls from some industry groups about the impact of a law protecting privacy online. Professor Turow explained that:

Far from destroying the opportunity for revenue in the digital world, a marketplace distinguished by information transparency and customer prerogatives can help move businesses in new, profitable directions. The reason lies in the relation between consumer trust and the brand. It is a well-accepted proposition that customer trust is at the core of a brand's profitability. In the world of material goods, customer trust primarily centers on two attributes—the **accuracy** of claims about the product and whether it **works** well. In products of the digital age that involve customer data, trust centers on those two attributes as well as two others: **transparency** regarding a company's specific uses of a customer's information and the customer's **prerogative** to include, withdraw, or otherwise limit the use of that information. While some executives fear that providing customers with information transparency and prerogatives will alienate customers and reduce profits, it is highly likely that just the opposite will happen. Moreover, an appropriate regulatory environment can encourage a new market that helps consumers make sense of, and guide, the streams of data about them.¹¹

Studies Show the Public is Concerned about Privacy Online

Surveys conducted by reputable organizations have highlighted two important findings: Consumers highly value data privacy, and consumers are confused about

¹¹ Personal correspondence, 14 June 2009. Professor Turow is the author of several books, including *Niche Envy: Marketing Discrimination in the Digital Age* (Cambridge, MA: MIT Press, 2008).

company protections of customer privacy. Few consumers really understand the data collection system and targeted advertising environment online. The University of Southern California's Center for the Digital Future found in its eighth annual "Surveying the Digital Future" project that "almost all respondents continue to report some level of concern about the privacy of their personal information when or if they buy on the Internet."¹² A poll from the Consumer Reports National Research Center found "72 percent are concerned that their online behaviors were being tracked and profiled by companies."¹³ Surveys by the University of Pennsylvania's Annenberg School of Communication and the University of California at Berkeley Law School's Samuelson Law, Technology & Public Policy Clinic also found confusion about customer data and customer privacy protections offered by businesses.¹⁴ A 2008 Harris Interactive poll found that U.S. consumers "are skeptical about the practice of websites using information about a person's online activity to customize website content."¹⁵

A June 2009 study from the UC Berkeley's School of Information found that

... most of the top 50 websites collect information about users and use it for customized advertising. Beyond that, however, most contained unclear statements (or lacked any statement) about data retention, purchase of data about users from other sources, or the fate of user data in the event of a company merger or bankruptcy.

Sharing of information presents particular problems. While most policies stated that information would not be shared with third parties, many of these sites allowed third-party tracking through web bugs. We believe that this practice contravenes users' expectations; it makes little sense to disclaim formal information sharing, but allow functionally equivalent tracking with

¹² USC Annenberg School for Communication, "Annual Internet Survey by the Center for the Digital Future Finds Large Increases in Use of Online Newspapers," press release, 28 Apr. 2009, <http://www.scribd.com/doc/15015797/USC-Annenberg-School-Digital-Future-2009-Highlights> (viewed 14 June 2009).

¹³ Consumers Union, "Consumer Reports Poll: Americans Extremely Concerned About Internet Privacy; Most Consumers Want More Control Over How Their Online Information Is Collected & Used," press release, 25 Sept. 2008, http://www.consumersunion.org/pub/core_telecom_and_utilities/006189.html (viewed 14 June 2009).

¹⁴ Chris Jay Hoofnagle and Jennifer King, "Research Report: What Californians Understand About Privacy Online," 3 Sept. 2008, http://www.law.berkeley.edu/clinics/samuelsonclinic/files/online_report_final.pdf (viewed 14 June 2009).

¹⁵ Harris Interactive, "Majority Uncomfortable with Websites Customizing Content Based Visitors Personal Profiles," press release, 10 Apr. 2008, http://www.harrisinteractive.com/harris_poll/index.asp?PID=894 (viewed 14 June 2009).

third parties.¹⁶

The Evolving World of Online Marketing and Data Collection

Today, we are witnessing a dramatic growth in the capabilities of marketers to track and assess our activities and communication habits on the Internet.¹⁷ Advertisers and marketers have developed an array of sophisticated and ever-evolving data collection and profiling applications, honed from the latest developments in such fields as semantics, artificial intelligence, auction theory, social network analysis, data-mining, and statistical modeling. Behavioral targeting (BT), the online marketing technique that analyzes how an individual user acts online so they can be sent more precise marketing messages, is just one tool in the interactive advertisers' arsenal. Social media monitoring, so-called "rich-media" immersive marketing, new forms of viral and virtual advertising and product placement, and a renewed interest (and growing investment) in neuromarketing, all contribute to the panoply of approaches that also includes BT. Behavioral targeting itself has also grown more complex. That modest little "cookie" data file on our browsers, which created the potential for behavioral ads, now permits a more diverse set of approaches for delivering targeted advertising. We are being intensively tracked on many individual websites and across the Internet. Behavioral targeting and related technologies may provide "marketing nirvana," as one company explained, but it leaves consumers unaware and vulnerable to an array of marketing communications that are increasingly tied to our financial and health activities.¹⁸

Advances in the capabilities of digital advertising are being made through a variety of initiatives. For example, Microsoft has established its adLab, with offices in Beijing, Redmond, Washington, and other locations, to work on behavioral targeting and other techniques. Yahoo! Labs in Bangalore works on a number of topics related to "advertising sciences." Google and the leading global advertising company WPP just established a grant program for academics to "to improve understanding and practices in online marketing."¹⁹

¹⁶ "Consumer Advocacy Group Comments In the Matter of a National Broadband Plan for Our Future," Center for Digital Democracy, Privacy Rights Clearinghouse and U.S. PIRG, FCC Docket 09-51, June 2009, <http://www.democraticmedia.org/node/405> (viewed 14 June 2009).

¹⁷ For a useful online illustration on the data collection and targeting capabilities of online ad networks, see *Advertising Age's* "Ad Networks+ Exchanges Guide. 2009. <http://brandedcontent.adage.com/adnetworkguide09/lobby.php?id=2> (viewed 14 June 2009).

¹⁸ "The Rise of On-site Behavioral Targeting," <http://www.omniture.com/offer/281> (viewed 14 June 2009).

¹⁹ Microsoft, "adCenter Labs—Innovations in Digital Advertising," <http://adlab.microsoft.com/>; Yahoo! Labs Bangalore, "Advertising Sciences," <http://bangalore.yahoo.com/labs/asceinces.html>; "Google and WPP Marketing Research Awards Program bestows 11 grants," press release, 18 Mar. 2009, <http://www.wpp.com/wpp/press/press/default.htm?guid=%7Be0af399a-8450-408c-8ba8-c35d31dae88c%7D>. Advances in digital advertising, including through data mining, artificial

One of the not-so-subtle ironies of the debate about behavioral advertising and privacy is that when marketers are grilled by regulators, they claim BT isn't really targeted to an individual and is relatively harmless. But what they tell each other reveals a medium with a powerful punch. The U.S. Interactive Advertising Bureau, the industry's principal trade and lobbying group, defines behavioral targeting as *"A technique used by online publishers and advertisers to increase the effectiveness of their campaigns. Behavioral targeting uses information collected on an individual's web browsing behavior such as the pages they have visited or the searches they have made to select which advertisements to be displayed to that individual. Practitioners believe this helps them deliver their online advertisements to the users who are most likely to be influenced by them."*²⁰

Among the many companies harnessing the power of behavioral targeting to fuel their online ad efforts is Yahoo! In a 2007 presentation to UK advertisers, Yahoo touted its behavioral targeting as a form of "intelligent user profiling." Explaining that it captures user "DNA" from "registration and behaviours" (including online activities such as page views, ads clicked, search queries, and search clicks), Yahoo uses this information to fuel its behavioral targeting. Behavioral targeting company Audience Science acknowledges the "massive amounts of data" it has available "to gain consumer insights on an individual level."²¹

In addition to targeting users on individual websites, BT also permits tracking of individual users across hundreds or more sites. Called retargeting, one company specializing in that approach explains it is *"able to deliver your message to visitors after they have left your site as they surf the Web. Your ads will appear to them as they surf their favorite internet sites—everything from popular news sites, social networking sites, to various blogs and informational sites. These are not pop-ups; these*

intelligence, and social media "sentiment" analysis, are supported by online marketers such as Microsoft, Google, and Yahoo, at various specialized academic conferences. See, for example, the upcoming Third Annual International Workshop on Data Mining and Audience Intelligence for Advertising," 28 June 2009, in Paris, <http://adlab.microsoft.com/adkdd2009/> (all viewed 14 June 2009).

²⁰ Interactive Advertising Bureau, "Glossary of Interactive Advertising Terms v. 2.0," <http://www.iab.net/media/file/GlossaryofInteractivAdvertisingTerms.pdf>. The US IAB counterpart in the United Kingdom defines behavioural targeting as "A form of online marketing that uses advertising technology to target web users based on their previous behaviour. Advertising creative and content can be tailored to be of more relevance to a particular user by capturing their previous decision making behaviour (eg: filling out preferences or visiting certain areas of a site frequently) and looking for patterns." Internet Advertising Bureau, "Jargon Buster A-D," <http://www.iabuk.net/en/1/glossaryatod.html> (both viewed 14 June 2009).

²¹ "AudienceScience CEO Hirsch Says Real-Time Bidding Enables True Value in Media," AdExchanger.com, 13 Mar. 2009, <http://www.adexchanger.com/ad-networks/behavioral-targeting-audiencescience/> (viewed 14 June 2009). For more examples of behavioral marketing practices, see my blog: <http://www.democraticmedia.org/jcblog/?cat=37>.

are advertisements that customers would normally see as they visit these webpages; only instead of a random ad being displayed, a targeted ad specifically for them will be shown. Think of it as following a customer out the front door of your store and asking if they saw the sale rack on the back wall. You appear to them again in the right place—at the right time. You will stay top of mind and customers will come back to your site and purchase.”²²

The use of retargeting also raises issues related to potential price discrimination, where certain consumers are offered “better deals” because they are seen as more long-term, lucrative customers. In recent presentations, Datran Media explained that it matches “*verified* offline demographic and lifestyle data with millions of online users” to deliver its targeted advertising.²³ But it also noted that for “Retargeting, Not all customers are equal,” describing one consumer in a “low income bracket” who spends only \$24.00 over an eight-month period versus “Customer Type B” in the “middle income bracket,” who spends \$140.00 over three years.” Such a system—where one user is determined through a variety of variables to be a better prospect than another and is offered different deals—raises a number of concerns about accountability, transparency, fairness, etc.²⁴

Behavioral targeting is growing. A recent study by Datran Media, which “surveyed more than 3,000 industry executives from Fortune 1,000 brands and interactive agencies, found that 65% of marketers use or plan to use behavioral targeting.”²⁵ More than half of the 1,200 marketers surveyed by Marketing Sherpa said they would increase their spending for behavioral targeting in 2009.²⁶ BT is expected to become widely used with online video, mobile phones, and online games and virtual worlds, further expanding its data collection and targeting role.²⁷

²² Fetchback, “Retargeting,” <http://www.fetchback.com/retargeting.html> (viewed 14 June 2009).

²³ Scott Knoll, “The Future of Behavioral Targeting,” 18 Dec. 2008, http://s3.amazonaws.com/thearf-org-aux-assets/downloads/cnc/online-media/2008-12-18_ARF_OM_Datran_Media.pdf (viewed 14 June 2009).

²⁴ Knoll, “The Future of Behavioral Targeting.” See also “Always Make a Good Impression: Understanding Household & Behavioral Targeting to Maximize Your Media Buys,” 1 Oct. 2008, <http://success.datranmedia.com/webinars/> (viewed 15 June 2009)

²⁵ “Datran Media Announces Third Annual Marketing Survey Results,” press release, 27 Jan. 2009, <http://corporate.datranmedia.com/newsandpress/press.php?id=01272009> (viewed 14 June 2009).

²⁶ Marketing Sherpa, “New Data: Year-End Survey Shows ROI and Budgets by Tactic,” 4 Feb. 2009, <http://www.marketingsherpa.com/article.php?ident=31037> (subscription required). Nearly half in this survey said they would spend more on ads fostering greater interactivity (so-called “rich media”).

²⁷ “Behavioral Targeting Ad Spend Poised to Grow, with Help from Online Video” *Marketing Vox*, 23 June 2008, <http://www.marketingvox.com/behavioral-targeting-ad-spend-poised-for-growth-with-help-from-online-video-039399/>; “Yahoo to Bring Behavioral Targeting to Mobile,” *Marketing Vox*, 21 May 2009, <http://www.marketingvox.com/yahoo-to-bring-behavioral-targeting-to-mobile-044141/>; “Behavioral Targeting in Second Life,” Advertising Lab, 28 Apr. 2007,

The Role of BT in Finance

Perhaps the most cautionary tale about the need to protect consumer privacy online arises when examining the role of online advertising and the financial market. By 2011, 101 million adults will be banking online—many even using their mobile devices to engage in personal financial transactions.²⁸ As evidence of the plight Americans feel today about their financial losses, it is perhaps telling to examine how the crisis has effected what they are searching for online. According to online market research company comScore, last December there were “searches using the term ‘unemployment’ (up 206 percent to 8.2 million searches) and ‘unemployment benefits’ (up 247 percent to 748,000 searches)... terms relating to personal asset situations, including ‘mortgage’ (up 72 percent to 7.8 million searches), ‘bankruptcy’ (up 156 percent to 2.6 million searches), and ‘foreclosure’ (up 67 percent to 1.4 million searches).”²⁹

During the height of the housing boom, the top-25 mortgage companies by advertising spending dolled out enormous sums on online advertising, especially display advertising. Four mortgage or financial companies were in the top ten of online advertising spending in August 2007, according to Nielsen: Low Rate Source (#1), Experian Group (#3), InterActive Corp (#4) [which then included Lending Tree.com] and Countrywide Financial Corporation (#5).³⁰ Consumers were faced with increasing expenditures by mortgage and loan companies for online marketing. For example, from 2005 to 2007, online mortgage services companies Countrywide Financial and LowRateSource increased their online advertising spending from \$18.3 to \$35.5 and \$17.9 million to \$51.7 million, respectively.³¹ Meanwhile, mortgage companies, anxious to have a prominent place in search engine

<http://adverlab.blogspot.com/2007/04/behavioral-targeting-in-second-life.html> (all viewed 14 June 2009).

²⁸ Lisa E. Phillips, “Banking and Bill Paying Online: Chasing Those Digital Dollars,” May 2007, http://www.emarketer.com/Report.aspx?code=emarketer_2000412. For mobile applications, see “Banking and Payments,” *Mobile Marketer*, <http://www.mobilemarketer.com/cms/news/banking-payments.html> (both viewed 14 June 2009).

²⁹ “Americans’ Online Search Behavior Points to Significant Increase in Personal Financial Turmoil,” press release, 24 Feb. 2009, http://www.comscore.com/Press_Events/Press_Releases/2009/2/Economic_Search_Terms (viewed 14 June 2009).

³⁰ “Nielsen/Netratings Reports Topline U.S. Data for August 2007,” www.nielsen-online.com/pr/pr_070910.pdf; Peter Kafka, “What Mortgage Crisis? Financial Ads Keep Pouring Online,” *Silicon Alley Insider*, 10 Sept. 2007, <http://www.businessinsider.com/2007/9/what-mortgage-c> (both viewed 14 June 2009).

³¹ Nielsen/NetRatings Report, Top 10 Advertisers by Estimated Spending, December 2006; April 2007; and August 2007.

advertising, bid up search terms like “refinancing mortgage” and “mortgage refinance.” Among the “highest paying keywords” for Google in 2006 involved mortgage related inquiries, with the “most aggressive users of keyword advertising” done by “asbestos lawyers, ambulance chasers, and mortgage brokers.”³²

The role of online lead generation (so-called “trigger leads”) and the use of behavioral targeting for mortgages and other loans represent a potentially critical threat to the privacy of digital consumers, whose data are used without their clear understanding, let alone control, of such surveillance. For example, Lightspeed Research promises marketers a “full wallet view across customers’ many financial services relationships,” providing “unparalleled insight into consumers’ use of credit, debit, banking and alternative payment products. We passively gather information from their financial accounts and merge it with third-party behavioral datasets, survey-based attitudinal insights, and industry expertise.”³³ Such commingling of online and off-line data, providing veritable strip searches of consumers’ economic status and marketplace behavior, has become commonplace, thanks to companies such as Targusinfo. “With the largest repository of US offline consumer information,” the company declares, “Targusinfo is uniquely positioned to take online targeting to the next level.... Its data repository is updated ten times daily and incorporates millions of data points across more than 100 dynamically changing data sources.”³⁴ “...Targusinfo has built a foundation of data from the nation’s telecommunications providers,” the company admits, “making our information exceptionally precise, relevant and actionable. Drawing from a proprietary network of more than 90 data sources, Targusinfo uses patented processes to link together the most complete and accurate name, address and phone data possible.”³⁵ So-called “trigger leads,” part of the online industry’s “lead generation” business, are also a part of the online ad environment, giving marketers

³² Financial services companies were reported to having “doubled their spending on Internet advertising during the past four years,” with predictions of further significant increases. “Online Spending to Balloon at Financial Co.s,” *Mortgage Advertising Insider*, 5 June 2007, <http://www.mortgagedaily.com/NewsAlertArchives/AdNewsletter060507.html>; Bernstein Research estimated 30 percent of online ad spending for 2008 would come from finance, real estate and insurance. Laurie Sullivan, “Bernstein: Online Ad Revenue To Grow,” *Online Media Daily*, 11 Aug. 2008, http://www.mediapost.com/publications/?fa=Articles.showArticle&art_id=88244 (both viewed 14 June 2009); “Most expensive Google ad keywords listed.” Cory Doctorow. Boingboing.com. 26 March 2006. <http://www.boingboing.net/2006/03/26/most-expensive-googl.html> (viewed 16 June 2009).

³³ Lightspeed Research, Financial Services Brochure, http://www2.lightspeedresearch.com/uploads/Financial_Services_Brochure.pdf (viewed 22 May 2009).

³⁴ Targusinfo, “Taking Online Targeting to the Next Level,” Mar. 2009, <http://marketing.targusinfo.com/AdAdvisorLearningCenter.html> (viewed 22 May 2009).

³⁵ Kim Garner, “How to Master Customer Acquisition: On-Demand Lead Scoring,” Apr. 2008, <http://www.targusinfo.com/documents/LeadScoring.pdf> (viewed 22 May 2009).

the ability to target consumers based on the financial activity at “near real time speed and precision.”³⁶

Omniure, an online marketing and Web analytics company that has worked with some of the largest subprime lenders in the mortgage industry, including Countrywide Financial, is a leader in behavioral targeting. Through its “foundational product,” SiteCatalyst, the company provides “actionable, real-time intelligence” about the online behavior of users visiting their websites.³⁷ Omniure’s use of behavioral targeting illustrates how this powerful approach is different from more traditional direct marketing. It explains that

On-site Behavioral Targeting leverages highly automated technology that takes advantage of the same Web analytics data you are most likely already collecting, such as referring site, referring search engine and keyword phrase, time and day of visit, machine properties such as IP address and browser settings, along with complete individual visitor click-stream data. The system efficiently organizes the anonymous data to build individual visitor profiles containing the hundreds of data variables that occur during a visitor’s visit to a Web site, each with some small amount of predictive value. Highly sophisticated mathematical models then interpret these variables in real-time and assemble together their collective predictive value to determine exactly which piece of content or promotion is most likely to engage each visitor, and then serves that content while the visitor is still on the site, keeping track of the entire context of each piece of served content. The On-site Behavioral Targeting system then measures if the visitor responded to the served content in the manner predicted. By efficiently learning in real time from any differences between the predicted response behavior and actual response behavior, the system continuously makes itself smarter for the next decision....

³⁶ See, for example, Equifax Marketing Services, “TargetPoint Acquisition,” www.equifaxmarketingservices.com/pdfs/TargetPoint-Acquisition-F06.pdf; Equifax Marketing Services, “High-Tech Industry,” <http://www.equifaxmarketingservices.com/high-tech-industry.htm>. One online marketing explained why online lead generation (OLG) is preferable to an offline approach: “With OLG, marketers are guaranteed to be getting new, fresh data and they don’t have to worry about its relevance—it is guaranteed to be up to date. As the data is brand-new and unique to them, it won’t have been sitting in a database for years while the person could have moved their house, changed telephone numbers or even changed their name. And due to the rigorous data-cleansing processes of Online Lead Generation, every lead is guaranteed to be fully contactable—there are no ‘dead leads,’ and all the contact details are fully checked.” Christopher Petix, “Economy Calls For Online Lead Generation,” *Online Media Daily*, 10 Feb. 2009, http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=99943 (all viewed 14 June 2009).

³⁷ Omniure, “Omniure SiteCatalyst 14: Real-Time, High-Performance Analytics & Reporting,” <http://www.omniure.com/offer/170> (registration required).

On-site Behavioral Targeting leverages each individual Web visitor's observed click-stream behavior, both on the current Web visit and from all previous visits, to decide what content is likely to be most effective to serve to that visitor, in order to achieve a desired and measurable commercial objective; such as increasing revenue, conversion, or click-through. It then measures its effectiveness and reports back the lift and yield that it delivers. On-site Behavioral Targeting is marketing nirvana in many ways, as it closes the loop in real-time while the visitor is still on your Web site.³⁸

Bankrate.com actively engages in behavioral targeting, explaining that "a consumer comes to Bankrate.com and reads three home equity articles, calculates the benefits of a home equity loan vs. a HELOC and looks at rates for a \$50k home equity loan. This consumer has shown tremendous interest and intent in securing a home equity product. As an advertiser, you now have the ability to continue communicating with this consumer across hundreds of web sites."³⁹

Bankrate.com's website places tracking cookies in online users' browsers, which then tracks pages later visited by them. Bankrate.com consumers who view "a mortgage story, rate table, or calculator within the last 120 days will be tagged and placed in the Mortgage Behavioral Targeting Bucket/Segment." When such a consumer visits a site within the Bankrate.com's behavioral targeting network, they will receive mortgage advertising. Bankrate.com offers behavioral targeting-enabled services for Mortgages, Home Equity, Credit Cards, and Deposits (CDs/Investment/Checking/Savings). In its Web page explaining "Why Behavioral Targeting," Bankrate.com notes that "Now you can expand upon this finite target and follow these users with your message once they've left the Bankrate site, but while they are still very much in-market...."⁴⁰

The Emerging Array of Behavioral Marketing Applications, including "Predictive" BT

BT's ability to lock in individual users is also being fueled by connections to offline databases, as well as other profiling technologies. For example, Acxiom, the marketing database giant, now offers a range of targeting tools for online marketing,

³⁸ Omniture, "The Rise of Onsite Behavioral Targeting," <http://www.omniture.com/en/products/conversion> (registration required).

³⁹ "Behavioral Targeting FAQs," Bankrate.com, <http://www.bankrate.com/mediakit/ad-behavioral-faq.asp> (viewed 14 June 2009).

⁴⁰ "Behavioral Targeting," Bankrate.com, <http://www.bankrate.com/mediakit/ad-behavioral.asp>; "Behavioral Targeting: How Does it Work?" Bankrate.com, <http://www.bankrate.com/mediakit/ad-behavioral-how.asp> (both viewed 14 June 2009).

including on websites, mobile phones and email.⁴¹ It's "Relevance-X"TM product, Acxiom explains, allows it to leverage "our expertise in consumer information and consumer behavioral segmentation to help marketers target and deliver personalized advertising messages.... Relevance-X helps you deliver the right message to the right audience where consumers are today—online.... Unlike traditional consumer segmentation systems, PersoniX is built and applied at the consumer household level, not at a ZIP CodeTM or block group."⁴²

Online targeting now also involves the use by marketers of sophisticated techniques that merge user data with information about our psychological or emotional behaviors.⁴³ For example, Mindset Media "lets advertisers define their targets on 21 standard elements of personality and then reach those targets on a mass scale in simple online media buys.... A MindsetProfile will identify the psychographics that drive your brand, your category, and even your competitors." Such targeting is available over one ad network that reaches "150 million unique viewers each month across more than 1,500 sites globally."⁴⁴

So-called "Predictive Behavioral Targeting" has emerged, which is described as a "technology that tries to target ads not only based on people's click behavior but also on predictions about their interests and future behavior." Engaging in "real-time" data tracking and analysis, predictive BT "learns from user behavior in realtime" and can be "exploited" for interactive marketing.⁴⁵ One U.S. predictive

⁴¹ Explaining its acquisition of behavioral re-targeting company EchoTarget, an Acxiom executive noted that the "acquisition goes beyond the current behavioral targeting paradigm to give clicks context, leveraging the most comprehensive data assets in the industry by combining proven direct marketing techniques segmenting individuals based on demographics, shopping patterns and lifestyle factors with the behavioral-based approaches of online targeting." Giselle Abramovich, "Acxiom Enters Digital Advertising with Acquisition of EchoTarget," *DM News*, 20 Sept. 2007, <http://www.dmnews.com/Acxiom-enters-digital-advertising-with-acquisition-of-EchoTarget/article/98540/> (viewed 14 June 2009).

⁴² Acxiom, "Acxiom Relevance-X," http://www.acxiom.com/PRODUCTS_AND_SERVICES/DIGITAL/RELEVANCE-X/Pages/Relevance-X.aspx; Acxiom, "The Power of Data: Acxiom Relevance-X Fact Sheet," http://www.acxiom.com/SiteCollectionDocuments/website-resources/pdf/Fact_Sheets/Relevance-X_FactSheet.pdf (both viewed 14 June 2009).

⁴³ For more on developments in the behavioral targeting market, see, for example, Behavioral Insider, http://www.mediapost.com/publications/?art_type=31&fa=Archives.showArchive; other useful sources include iMedia Connection, <http://imediainconnection.com>, and ClickZ, <http://www.clickz.com/> (all viewed 14 June 2009).

⁴⁴ Mindset Media, "Media with Attitude," <http://www.mindset-media.com/>; Mindset Media, "Our Products," <http://www.mindset-media.com/advertisers/products/>; Mindset Media, "MindsetProfile," <http://www.mindset-media.com/advertisers/products/profiles/> (all viewed 14 June 2009).

⁴⁵ Predictive Behavioral Targeting, "What is PBT?" <http://www.predictive-behavioral-targeting.com/what-is-predictive-behavioral-targeting/>. For an animated overview of predictive behavioral targeting, see nugg.ad, <http://www.nugg.ad/en/products/flash.html> (both viewed 14 June 2009).

behavioral marketer explained that its new “Precision Profiles” product uses “...a wider spectrum” of data for such targeting, “including web browsing, ad interaction, search and shopping behavior” that “results in more granular profiles.”⁴⁶

Behavioral targeting is just one tool used by online marketers to gather information on users. Online marketers employ an array of interrelated techniques to target individual users, as well as to collect (or facilitate the collection of) consumer data.⁴⁷ Semantic-based profiling (based on the tagging and analysis of Web pages) is also used. For example, Collective Media’s “advanced audience behavior targeting” can use a “contextual classification engine” that analyzes “each page for the presence of over 2 million words and word combinations, and [uses] this analysis to categorize and/or tag pages into over 200,000 hierarchical categories.... Personifi’s uniquely powerful ad optimization solution observes all available behavioral, contextual, demographic and other data to determine the most effective ad for each impression.... Personifi leverages this understanding to deliver the most relevant ads to individual users at the optimal times. Ad recommendations are continually optimized in real time based on observed behaviors and responses.”⁴⁸

The collection of individual data to create more personalized online experiences, while potentially useful, raises privacy and consumer protection issues. As data are collected, a user’s online experience is altered, with pages being tailored to an “individual user’s characteristics and behaviors.” Users have no idea, for example, that x+1’s “Predictive Optimization Engine (POE)” is part of a “predictive marketing platform that utilizes automated, real-time decision-making to improve the scale and efficiency of the online marketing process.... [It] leverages sophisticated mathematical models to make optimal segmentation and targeting decisions on website and in external media campaigns. POE™ derives actionable decisions from massive amounts of complex data. Using a wide variety of data sources, POE™ profiles end-users and anonymously tracks their online behavior and responsiveness. It then identifies patterns in visitor characteristics and their

⁴⁶ “ValueClick Media Launches Predictive Behavioral Targeting,” press release, 21 July 2008, <http://phx.corporate-ir.net/phoenix.zhtml?c=84375&p=irol-newsArticle&ID=1177051> (viewed 14 June 2009).

⁴⁷ To see how major online marketers offer an array of targeting options, including behavioral and mobile marketing, see, for example, AOL Platform A, “Audience Targeting,” <http://www.platform-a.com/advertiser-solutions/audience-targeting>; Microsoft Advertising, “Ad Solutions,” <http://advertising.microsoft.com/ad-solutions>; and Yahoo! Advertising, “Advertiser & Agency Solutions,” <http://advertising.yahoo.com/advertisers/> (all viewed 14 June 2009).

⁴⁸ Collective Media, “Targeting by Behavior,” <http://www.collective.com/targeting#behavior>; Personifi, “Ad Network Optimization,” http://www.personifi.com/ad_networks_optimization.html; Personifi, “Ad Network: Contextual,” http://www.personifi.com/ad_networks_contextual.html; Personifi, “Ad Network Classification,” http://www.personifi.com/ad_networks_classification.html (all viewed 14 June 2009).

response activity and ultimately determines the best content and offer to display.”⁴⁹ As we will explain later, the use of “anonymous” by so many marketers is at odds with the tremendous and undisclosed data collection that is increasingly shaping our experiences online.

The self-learning capabilities of contemporary interactive ad systems also raise important privacy and consumer welfare concerns. For example, “Meaning-Based Marketing” by one company “forms an understanding of the sentiment and context of all customer interactions, including social media, user-generated content and user interactions.” It “creates a targeting system... based on deep profiles, sentiment, behavior, all major types of customers attributes, and the content and concepts.”⁵⁰

An array of other data tools has emerged that is shaping the experience—and the deals and offers—available to the American consumer. For example, “Using web analytics,” boasts online marketer Coremetrics, “businesses can clearly see a customer’s path from an email opened to an online loan application, and everything browsed in-between.... Coremetrics Online Analytics provides the most accurate and complete record of visitor behavior—capturing every click of every visitor over time, and storing them in Coremetrics’ LIVE (Lifetime Individual Visitor Experience) Profiles secure database. As a result, marketers can build a comprehensive and accurate record of online visitor behavior—a record that connects visitor behavior over time, so they can see all the marketing interactions each visitor has with the company.”⁵¹

Social Media Marketing and “Digital Footprints”

Over the last few years, the growth of social networks has been accompanied by the development of a social media-marketing field. Social networks have now taken behavioral targeting to another level, allowing marketers to commercially target users based both on their online activities and self-disclosed profile information. Few social media users understand the wide range of data tracking and targeting that operates on and via these networks. Our communications on blogs, social networks and other Web 2.0 media are now being analyzed, including for the purpose of targeting what are called key or “Alpha” influencers (people whose opinion sways their network of relationships). As the authors of one recent book on the social media marketing industry explained, “The digitally networked visitor to

⁴⁹ x+1, “Our Technology,” <http://www.xplusone.com/solutions/technology.html> (viewed 14 June 2009).

⁵⁰ Interwoven, “Autonomy Optimost Adaptive Targeting,” http://www.interwoven.com/components/pagenext.jsp?topic=SOLUTION::ADAPTIVE_TARGETING (viewed 14 June 2009).

⁵¹ Coremetrics, “Optimizing Marketing Spend of Financial Services: Leveraging Analytics in Marketing Budget Allocation.”

these social media forms leaves behind footprints, shadows and trails of his or her individual collective endeavours in the form of data; data that enables new type of marketing and communication between and within consumer communications.... Over time, this process will lead to an understanding of the participant's digital footprint."⁵² Products such as Nielsen's Buzzmetrics, BuzzLogic ("conversation ad targeting"), Ripple6 and Radian6 are part of this new digital data collection apparatus.⁵³

So-called third-party applications, including small pieces of software known as widgets, "phone home" information about their users, contributing to industry's data collection practices. For example, RockYou, which has created popular applications available on Facebook and other sites, recently launched its "Social Video Ads and Cross Platform Video Distribution" service. The data it collects with video, it says, "go far beyond impressions. Audience interactions (views, stops, rewinds, sharing) are gauged by the millisecond and response can be measured, in real numbers. Advertisers who can combine that data with behavioral or demographic profiling, to reach exact targets, get amazing results."⁵⁴ Another company, Clearspring (which makes many popular widgets), explains that it provides "detailed real-time analytics... to understand where visitors are viewing your widget, where it is spreading from and how people are interacting with it."⁵⁵ Kontagent is a "Facebook-funded Partner" that can deliver an "accurate understanding of the demographics of a site's users, how the users are socially linked, and what social interactions occur among the site's users."⁵⁶ It can "track"

⁵² Ajut Jaokar, Brian Jacobs, Alan Moore and Jouko Ahvenainen, *Social Media Marketing: How Data Analytics Helps to Monetize the User Base in Telecoms, Social Networks, Media and Advertising in a Converged Ecosystem* (London: Futuretext, 2009), pp. 2, 19.

⁵³ See, for example, Radian6, "Social Media Monitoring and Engagement for Agencies and the Enterprise," <http://www.radian6.com/cms/solution>; BuzzLogic, "Get Your Ads in Front of Passionate Consumers," <http://www.buzzlogic.com/advertisers/conversation-targeting.html>; Nielsen Online, "Millions of Consumer are Talking—Are You Listening," http://www.nielsen-online.com/products.jsp?section=pro_buzz; Ripple6, "Revolutionizing Research Through Online Conversations," <http://www.ripple6.com/platform/socialInsights.aspx>; Suresh Vittal, "The Forrester Wave: Listening Platforms, Q1 2009," 23 Jan. 2009, http://www.nielsen-online.com/emc/0901_forrester/The%20Forrester%20Wave%20Listening%20Platforms%20Q1.pdf. The Interactive Advertising Bureau recently published "Social Advertising Best Practices," <http://www.iab.net/media/file/Social-Advertising-Best-Practices-0509.pdf> (all viewed 14 June 2009), which discusses some of data capture that occurs within social media, and ways of informing users.

⁵⁴ "RockYou Adds Video to its Ad Network," 3 Feb. 2009, <http://blog.rockyouads.com/?cat=20> (viewed 15 June 2009).

⁵⁵ Clearspring, "Documentation: Reporting," <http://www.clearspring.com/docs/reporting> (viewed 15 June 2009).

⁵⁶ Kontagent, "Social Network Developers Demand New Class of Viral Analytic Tools," press release, 23 July 2008, <http://www.kontagent.com/about/press/social-network-developers-demand-new-class-of-viral-analytic-tools/> (viewed 15 June 2009).

such data points as age, gender, location, number of friends, page views, and unique visits. Kontagent also tracks and measures what it calls the “virality” factor of a social networking application (such as a game), including “invite sent per user” and “invite and notification conversion rates” (meaning how a person responded to the invitation to download an application).⁵⁷

Behavioral targeting is also being used in social networks. For example, Lotame's “behavioral targeting technology... analyzes behavior from consumers who chat-up brands on social media and community platforms....”⁵⁸ Its “Crowd Control” product “optimizes behavioral targeting by capturing previously unavailable data based on engagement, which is inherent to social media.”⁵⁹

As MySpace explained in 2008 to advertisers, its “HyperTargeting” system allows it to meld registration data (“personal demographic information provided by MySpace users when they become members”) with MySpace Profile Data (“freely expressed information by consumers about their passions and interests”). The result, claims MySpace, is “Next-Generation Targeting.”⁶⁰ Nor are MySpace users aware that their data are sent off to a data warehouse each day to be analyzed for “deep insights,” including “real-time analysis to drive [Fox Interactive Media’s] advanced targeted advertising systems.”⁶¹ Such data mining is increasingly part of the structure of the online ad-targeting universe.

Facebook, as you know, has had several well-publicized incidents involving its collection and use of data. After one recent flare-up, Facebook developed a set of “principles” and a “Statement of Rights and Responsibilities” that involved a discussion and a vote by its users.⁶² But we believe that Facebook (and many other

⁵⁷ Kontagent, “The Kontagent Fact Sheet,” <http://www.kontagent.com/about/> (viewed 15 June 2009).

⁵⁸ Laurie Sullivan, “Lotame's Three-Way BT Deal Measures Attitude, Buzz,” *Online Media Daily*, 2 Feb. 2009, http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=99440 (viewed 15 June 2009).

⁵⁹ “Lotame Receives Multi-Million Dollar Series a Financing in a Round Led by Battery Ventures,” press release, 11 Feb. 2008, <http://www.reuters.com/article/pressRelease/idUS107393+11-Feb-2008+PRN20080211> (viewed 15 June 2009).

⁶⁰ MySpace Media Kit, 2008, personal copy.

⁶¹ Aster, “MySpace.com Scales Analytics for All of Their Friends,” 2009, www.asterdata.com/resources/downloads/casestudies/myspace_aster.pdf; “Data Warehouse Appliance from Sun and Greenplum Powers Hypertargeting for Fox/MySpace,” Greenplum, 24 Sept. 2008, <http://www.greenplum.com/news/106/231/Data-Warehouse-Appliance-from-Sun-and-Greenplum-Powers-Hypertargeting-for-Fox-MySpace/d,blog/> (both viewed 14 June 2009).

⁶² Facebook, “Facebook Principles,” 15 April 2009, http://www.facebook.com/note.php?note_id=183540865300; Rochelle Garner, “Facebook Creates Site Principles After Users Complain,” *Bloomberg.com*, 26 Feb. 2009, <http://www.bloomberg.com/apps/news?pid=20601103&sid=azLmshQcmBJw&refer=us> (both viewed 15 June 2009).

social networks and related sites), fail to adequately tell its users about how their data is collected and used. For example, Facebook tells brand advertisers that they can take advantage of a user's profile: "A profile is any individual's online representation of self. Through their profiles, people share details about their interests, activities and even contact information.... Reach the exact audience you want with Facebook targeting. The Facebook targeting spectrum ranges from broad reach demographic and geographic preferences like networks and colleges to more granular and specific profile interests." An examination of Facebook's media kit—or any similar description by competitors—will reveal a system based on a digitally driven "viral" marketing approach. We believe this system is non-transparent and largely unaccountable to the majority of users.⁶³

Much has also been said about what is claimed to be the self-correcting nature related to data collection practices and digital media, such as with Facebook. But although users did protest recently over Facebook's Terms of Service, it was the crucial role of consumer groups and the threat of regulatory action that actually brought the problem to light and forced the company to reconsider its practices. It was *The Consumerist*, owned by Consumers Union, that played the major role in identifying Facebook's proposed changes, which were influenced as well by a pending complaint that was going to be filed at the FTC by the Electronic Privacy Information Center and other privacy groups.⁶⁴

Online Ad Exchanges: Data Bought and Sold in "12 milliseconds"

The monetization of our data and online behaviors is now being bought and sold in marketplaces that have so far been operating without the scrutiny of regulators or Congress. As *BusinessWeek* explained, "[A]d exchanges are sort of like stock exchanges for online ads. Web sites put ad space up for auction, and ad agencies, armed with demographic and behavioral data about the people who visit those sites, bid to place ads for their clients' campaigns."⁶⁵ Google, Yahoo, Microsoft, and others run such exchanges. Microsoft's AdECN ad exchange describes its process: "Advertisers... specify in advance the targeting they want, and how much they are willing to pay when such an opportunity comes up. That's their bid. The action

⁶³ Facebook, "Media Kit for Brand Advertisers," personal copy.

⁶⁴ Chris Walters, "Facebook's New Terms Of Service: 'We Can Do Anything We Want With Your Content. Forever,'" *The Consumerist*, 15 Feb. 2009, <http://consumerist.com/5150175/facebook-new-terms-of-service-we-can-do-anything-we-want-with-your-content-forever>; Douglas MacMillan, "The Complaint Almost Filed Against Facebook," *BusinessWeek*, 18 Feb. 2009, http://www.businessweek.com/the_thread/techbeat/archives/2009/02/the_complaint_a.html (both viewed 15 June 2009).

⁶⁵ Robert D. Hof, "Google's Grab for the Display Ad Market," *BusinessWeek*, 11 June 2009, http://www.businessweek.com/magazine/content/09_25/b4136052151611.htm?campaign_id=rss_daily (viewed 15 June 2009).

starts when a viewer lands on a website page. That triggers a single-pass auction among all of the interested advertisers. In about 12 milliseconds—as the page is loading—we run the auction, the highest bidder wins, and we show that ad.... The advertiser knows that his ad is going to be shown on a page or a site with certain content, or at a certain time, or to a person with a certain profile, and so on.... We also offer behavioral, including a viewer's recent search queries, and profile-based targeting: age, gender, income.... We cull [profile data] through relationships with our partners. Here's how it works: when a viewer lands on a webpage in the exchange, we can tell if that viewer is known by one of our partners. If so, we query the partner, who tells us about that person...."⁶⁶

The Growing Use of Neuroscience in Designing and Deploying Online Ads

Advertisers are increasingly using a range of what are called “neuromarketing” techniques designed to shape and help deliver marketing messages, including for the digital market. As part of the ad industry’s “engagement” initiative, marketers, as one leading online marketing executive explained, are exploring how to harness the “subtle, subconscious process in which consumers begin to combine the ad’s messages with their own associations, symbols and metaphors to make the brand more personally relevant.”⁶⁷ Marketers are using such techniques as functional magnetic resonance imaging (fMRI), eye-tracking studies, galvanic skin response, and electroencephalology (EEG) to finely hone their strategies for digital advertising. Among the online marketing companies using some form of neuromarketing are Google, Microsoft, and Yahoo. Google used neuromarketing researcher NeuroFocus last year to test so-called “inVideo Ads” for its YouTube service. The study “used biometric measures such as brainwave activity, eye-tracking and skin response to gauge the impact of ads.”⁶⁸ MTV recently “conducted a three-day study of more than 60 gamers at a biometrics lab in Las Vegas; they showed the players various ads and games, all while examining stats like heart rate, respiration, movement patterns and visual attention.... [T]hey found that 15-second pre-rolls were the most effective way to garner a player’s ‘focused attention.’”⁶⁹ The

⁶⁶ AdECN, “FAQ: The Auction,” http://www.adecn.com/faq_3.html; AdECN, “FAQ: Targeting,” http://www.adecn.com/faq_4.html (both viewed 15 June 2009).

⁶⁷ Jim Nail, “The 4 Types of Engagement,” *iMedia Connection*, 13 Oct. 2006, <http://www.imediaconnection.com/content/11633.asp> (viewed 15 June 2009).

⁶⁸ Mike Shields, “Google, MediaVest Tap Biometrics for InVideo Ads Play,” *Mediaweek*, 23 Oct. 2008, http://www.neurofocus.com/pdfs/neurofocus_google_taps_biometrics.pdf; Mark Walsh, “Google: This Is Your Brain On Advertising,” *Online Media Daily*, 23 Oct. 2008, http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=93319 (both viewed 15 June 2009).

⁶⁹ Laurie Sullivan, “BT: Can It Mean Behavioral Responses To Ads?” *Behavioral Insider*, 4 June 2009, http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=107346; David Kaplan, “Need To Reach Casual Gamers? MTV Says 15-Second Pre-Rolls Work Best,” *paidContent.org*, 10 June

ad industry's highest research award—the Grand Ogilvy—was awarded this year to a campaign for Frito-Lays Cheetos, with major online components that used an array of neuromarketing techniques.⁷⁰

Behavioral Targeting and Mobile Marketing

Many of the same consumer data collection, profiling, and behavioral targeting techniques that raise concern in the more “traditional” online world have been purposefully brought into the mobile phone marketplace. Mobile marketers in the U.S. are already deploying a dizzying array of targeted marketing applications, involving so-called rich media, mobile video, branded portals, integrated avatars that offer “viral marketing” opportunities, interactive and “personalized wallpapers,” “direct-response” micro-sites, and a variety of social media tracking and data analysis tools. Behavioral targeting is swiftly migrating to the mobile world. Mobile devices, which know our location and other intimate details of our lives, are being turned into portable behavioral tracking and targeting tools that consumers unwittingly take with them wherever they go. Enpocket, a leader in “intelligent mobile marketing” that was recently purchased by Nokia, provides a sobering example of the potential of this medium for behavioral targeting. Enpocket has developed a “Personalization Engine,” which it described as “a system of analytical models that scores mobile users based on their past behavior. It enables us to predict which products and services a customer might purchase next. That way, we can provide the right message, advertisement or promotion to the right person at the right time. It can also forecast events, such as customer churn and will recommend effective customer engagements to preempt attrition. When integrated with the Marketing Engine, the result is highly relevant marketing messages, personalized recommendations, less churn, and higher sales of mobile consumables.”⁷¹

U.S. consumers will, as you know, increasingly rely on their mobile devices for a wide range of services, including sensitive transactions related to finance and

2009, <http://www.paidcontent.org/entry/419-mtvn-looks-to-biometrics-to-guide-casual-game-ads/#extended> (both viewed 15 June 2009).

⁷⁰ Advertising Research Foundation, “The ARF 2009 David Ogilvy Awards,” <http://www.thearf.org/assets/ogilvy-09>; “Grand Ogilvy Winner: ‘Mischievous Fun with Cheetos,’” <http://thearf-org-aux-assets.s3.amazonaws.com/ogilvy/cs/Ogilvy-09-CS-Cheetos.pdf>. For more on the use of neuroscience and marketing, see Advertising Research Foundation Engagement Council, <http://www.thearf.org/assets/engagement-council>; Neurofocus (now partly owned by Nielsen), <http://www.neurofocus.com/>; Innerscope Research, <http://www.innerscoperesearch.com/>; and Olson Zaltman Associates, <http://www.olsonzaltman.com/> (all viewed 15 June 2009).

⁷¹ Enpocket, “Advanced Profiling and Targeting,” <http://www.enpocket.com/solutions/enpocket%20platform/advanced-profiling-and-targeting> (viewed 1 July 2008).

health. We should not permit the expansion of behavioral targeting into the mobile world (where it will be combined with precise location information and history).⁷²

Digital Marketing, Behavioral Targeting and Health

Consumers increasingly rely on the Internet and other online media for health advice and services. The Web, we recognize, is an important source for such information. But consumers seeking health information must be assured of the highest level of privacy protection. Pharmaceutical companies are now using digital marketing services—including what’s called “unbranded” social networks.⁷³ There are also a growing number of health-related websites offering interactive advertising opportunities for marketers, including “condition-targeted” placement (facilitated by “widgets and viral elements”). Online ad giants, such as Time Warner’s Platform A, have made presentations on “Behavioral Targeting for Pharmaceutical Marketers.” The role of online data collection, interactive marketing, and its impact on the public health requires serious scrutiny from this committee, other lawmakers, and regulators.⁷⁴

Digital Media and Marketing Data Consolidation

The online advertising business has witnessed dramatic consolidation over the last several years; major interactive giants have swallowed leading behavioral targeting and other data targeting companies. Google now operates DoubleClick; Yahoo acquired Blue Lithium and Right Media; Microsoft bought aQuantive and Screen Tonic; Time Warner’s AOL acquired Tacoda and Third Screen Media; WPP took over 24/7 Real Media. As you know, last year there was a flurry of activity related to the future of Yahoo involving Microsoft and Google. A tiny handful of companies engaged in data collection that track, profile, and target us across websites, mobile applications, online games, virtual worlds, and search engines are playing an

⁷² For a review of the state of mobile marketing, behavioral targeting and related concerns, see Center for Digital Democracy and U.S. PIRG, “Complaint and Request for Inquiry and Injunctive Relief Concerning Unfair and Deceptive Mobile Marketing Practices,” Federal Trade Commission Filing, 13 Jan. 2009, http://www.democraticmedia.org/current_projects/privacy/analysis/mobile_marketing (viewed 15 June 2009).

⁷³ For example, Digitas Health works with AstraZeneca, Pfizer, Lilly, Merck and others. Digitas Health, “Clients,” <http://www.digitashealth.com/#/work/clients/>. Ogilvy Healthworld provides a range of direct to consumer marketing services, including online. Ogilvy Healthworld, “Direct to Consumer, Direct to Client,” http://www.ogilvyhealthworld.com/2-5_healthworld_services_dtc.html (both viewed 15 June 2009).

⁷⁴ See, for example, Waterfront Media, “Advertise with Us,” <http://www.waterfrontmedia.com/advertise-with-wfm.aspx>; Healthline, “2009 Media Kit,” www.healthline.com/corporate/media/healthline_media_kit_2009.pdf; and Platform A/AOL, “Behavioral Targeting for Pharmaceutical Marketers,” 2006, personal copy (all viewed 15 June 2009).

important role shaping the Internet's future. Given the tremendous data collection capabilities inherent in digital marketing, and the growing concentration of influence by a few, the need for legislative action to protect consumer privacy is clear.

Multicultural Targeting

Another area that deserves scrutiny is the online marketing services specifically focused on the country's diverse multicultural communities, including African Americans and Hispanics. The collection of data identifying users by what is assumed to be their ethnic interests raises concerns about profiling and its impact. While I fully support the growth of a robust online ad system that creates diverse ownership of online publishing services, the implications of ethnic and racial data collection practices must be reviewed (including the growing number of online ad services focused on the Spanish-speaking U.S. market).⁷⁵

Children and Adolescents

Young people, especially adolescents, are at the virtual epicenter of the digital marketing system. They are the focus of a wide range of digital marketing techniques, including behavioral targeting. A coalition of children's health, educational and advocacy groups, including the American Academy of Child and Adolescent Psychiatry, the American Academy of Pediatrics, the American Psychological Association, Children Now, the Center for Digital Democracy, and several others, has asked the FTC to prohibit all behavioral targeting to young people under 18. To see the extent of this targeting system, all one has to do is review how food and beverage marketers have deployed a sophisticated array of digital advertising, including online games, virtual worlds, social networks, interactive video, and the like. This country faces a youth obesity epidemic, which is taking its toll on the health of our young people, and will contribute to increasing

⁷⁵ There are online marketing firms, including ad networks, focused on what's called the multicultural market. See, for example, AdGroups.com, which offers marketers the ability to segment using such variables as ethnicity, gender, location, age, income status, entertainment interest, blogs and "Hip Hop Culture." AdGroups.com, "Ad Network + Exchanges Guide," <http://brandedcontent.adage.com/adnetworkguide09/network.php?id=4>. Major online marketers also target these groups. See, for example, Time Warner/AOL's Advertising.com "MediaGlow" online ad targeting network, which reaches "96.5% of Hispanics online," <http://www.mediaglow.com/>. Platform A explains that older Hispanic women are natural "viral marketers," able to influence purchases for food, music and video games. AOL Platform A, "Meet Carmen," <http://www.platform-a.com/advertiser-solutions/audience-targeting/consumer-profiles/carmen-age-49> (all viewed 15 June 2009).

health costs. We respectfully urge the subcommittees to hold a separate hearing on privacy threats for both children and adolescents.⁷⁶

Deep Packet Inspection and Behavioral Targeting

All of the data collection and targeted online marketing practices we describe in this testimony become even more grave when a network operator is permitted to engage in deep packet inspection. Given actions by the FCC, consumers must rely on a handful of cable and telephone networks for their broadband service. Deep packet inspection (DPI) technologies enable these network providers to track their subscribers' actions online (data that can then be merged with extensive customer information files). When the power of online ad profiling and targeting technologies are combined with the microscopic tracking and analysis capabilities of DPI, consumer privacy is further threatened.

The Failure of Self-Regulation

The practices we describe here, which are just the proverbial tip of the data-collection iceberg, have all emerged while the online ad industry was engaged in various forms of "self-regulation." Until the series of FTC complaints brought by CDD/USPIRG and others, and most notably until the political pressure brought upon that agency for its failure to address privacy concerns when it approved the Google/DoubleClick merger, the online ad industry's self-regulatory system was in a Rip Van Winkle-like deep slumber. It was only after the growing call for regulatory action, including from your subcommittees, that some in the online marketing industry finally admitted that privacy is an issue.⁷⁷ While there have been some promising developments in terms of reduced data retention and new forms of opt-in and opt-out procedures, they are the result of regulatory pressure—especially from the European Union's Article 29 Working Party. U.S. consumers should not have to

⁷⁶ Comments of American Academy of Child and Adolescent Psychiatry, the American Academy of Pediatrics, the American Psychological Association, Benton Foundation, Campaign for a Commercial Free Childhood, Center for Digital democracy, Children Now, and the Office of Communications of the United Church of Christ. Online Behavioral Advertising Principles, Federal Trade Commission, 11 April 2009,

http://www.democraticmedia.org/news_room/letters/Letter_re_behavioral_advertising_comments; Kathryn C. Montgomery and Jeff Chester, "Interactive Food and Beverage Marketing: Targeting Adolescents in the Digital Age," *Journal of Adolescent Health*, 2009 (in press). For a good overview of contemporary digital marketing practices targeted at youth for fast foods and other high fat products, see "Digital Marketing Update," <http://www.digitalads.org/updates.php> (all viewed 15 June 2009).

⁷⁷ For an excellent critique about the failure of the Network Advertising Initiative, see Pam Dixon, "The Network Advertising Initiative: Failing at Consumer Protection and at Self-Regulation," World Privacy Forum, 2 Nov. 2007, http://www.worldprivacyforum.org/behavioral_advertising.html (viewed 15 June 2009).

rely on EU-based regulatory bodies to protect their privacy. Nor should we be content with piecemeal and incremental changes in policies due to the building pressure for real legislative and regulatory reform.⁷⁸

Blessed by an antiquated federal policy that narrowly defines personal information as name, street address, or social security number, marketers claim that they don't violate our privacy because they may not have such information. But in today's online world, it isn't necessary to know someone's actual name or street address to actually identify—via cookies, IP addresses, and other online targeting techniques—how a particular person interacts online. We are glad the FTC has recently awoken to the realities of today's online marketplace, and has acknowledged that it must address this important issue.⁷⁹

Privacy policies are an inadequate mechanism that fail to protect the public. As documented in a recent UC Berkeley School of Information study on online privacy, privacy policies are difficult to read; the amount of time required to read them is too great; they lead consumers to falsely believe their privacy is protected; there isn't meaningful differences between policies, leaving consumers with no alternatives; and consumers aren't really aware of the "potential dangers."⁸⁰

I recognize that Google, Yahoo, and Microsoft, among others, have made some promising changes in their data collection practices. Google, for example, has developed a form of opt-in for its version of behavioral targeting—which it calls "interest-based." Google is initially creating segments for targeting, according to press reports, "across 20 categories and 600 subcategories" (and the company has reportedly promised that it won't target a number of sensitive areas, such as race, religion, sexual orientation "or certain types of financial or health concerns"). This move by Google, of course, comes after it incorporated behavioral targeting technology leader DoubleClick into its holdings. Google will be offering such behavioral targeting across both its "text ads and display network." Given Google's other targeting capabilities, including on YouTube, we strongly believe that even this new system will fail to adequately inform consumers about the extent of their

⁷⁸ "Federal Trade Commission Closes Google/DoubleClick Investigation," press release, 20 Dec. 2007, <http://www.ftc.gov/opa/2007/12/googledc.shtm>. The dissent from FTC Commissioner Pamela Harbour and pressure from privacy and consumer groups helped force the agency to issue proposed self-regulatory privacy principles on the same day it approved the merger. The EU's Article 29 Working Party, and generally the stronger safeguards on data protection in the EU, has forced major online companies to alter some practices to better protect privacy. See European Commission, Justice and Home Affairs, Data Protection Working Party, "Online Consultations," http://ec.europa.eu/justice_home/fsj/privacy/workinggroup/consultations/index_en.htm (both viewed 15 June 2009).

⁷⁹ "FTC Staff Revises Online Behavioral Advertising Principles," press release, 12 Feb. 2009, <http://www.ftc.gov/opa/2009/02/behavad.shtm> (viewed 15 June 2009).

⁸⁰ Joshua Gomez, Travis Pinnick, and Ashkan Soltani, "KnowPrivacy," 1 June 2009, <http://www.knowprivacy.org/> (viewed 15 June 2009).

data collection and its impact on their privacy. Nor should consumers be willing to accept promises that a company will not target based on past search queries or so-called “sensitive data, since such policies could change over time.”⁸¹

The Role of the FTC

The FTC has been largely incapable of ensuring American privacy is protected online. Staff has been reined in from more aggressively pursuing the issue, primarily to ensure that industry self-regulation remains as the agency’s principle approach. The FTC is also encumbered with a lack of staff working on privacy and online marketing issues, including personnel familiar with the technical characteristics of contemporary marketing. As we mentioned earlier, its recent adoption of self-regulatory principles was made possible only because of the political controversy generated by a merger review. The FTC needs to have additional resources, especially so it can better protect consumers from digital marketing transactions involving their financial and health data. Congress should press the FTC to be more proactive in this arena.

We are confident that the FTC is now ready to address online marketing and consumer privacy more meaningfully than in the past. Chairman Jon Leibowitz has already stated he wants to see real progress on the issue. His appointment of highly regarded legal scholar and consumer advocate David Vladeck as the new director of the Bureau of Consumer Protection is a positive sign that the FTC will now take digital marketing issues very seriously.

The Role of Congress

We urge you to enact legislation that would ensure that consumer privacy online is protected. The foundation for a new law should be implementing Fair Information

⁸¹ Elyse Tager, “Behavioral Targeting Takeaways From ad:tech SF,” *Clickz*, 13 May 2009, <http://www.clickz.com/3633682>; Barry Schwartz, “Google Gets Into Behavioral Targeting, Launches ‘Interest-Based Advertising’ Beta,” *Search Engine Land*, 11 May 2009, <http://searchengineland.com/google-introduces-interest-based-advertising-beta-16855>. How such a system can be changed over time to permit greater targeting is illustrated by an exchange Schwartz had with a Google executive: “I asked Google how detailed can these ads get? I asked, can an advertiser pass along a specific ad to a specific user? For example, can I show an ad for the Sony HDR-XR200V if this user added the Sony HDR-XR200V to their shopping cart on my site but did not check out? Bender said yes, but ultimately it is up to the advertiser how specific they want to get with those ads.” In the same article search expert Danny Sullivan added that Google had confirmed it had “tested behavioral targeted ads using past search history data.” Google executives had initially expressed some reservations about engaging in behavioral targeting. Eric Auchard, “Google Wary of Behavioral Targeting in Online Ads,” *Reuters*, 31 July 2007, <http://www.reuters.com/article/technologyNews/idUSN3135052620070801> (all viewed 15 June 2009).

Practices for the digital marketing environment. Notice and Choice, which has been the foundation of the self-regulatory regime, is a failure. Despite self-regulation, what we have witnessed is increasing data collection and use—all without the real, informed understanding and consent of users. Americans shouldn't have to trade away their privacy and accept online profiling and tracking as the price they must pay in order to access the Internet and other digital media. The failure to adequately regulate the financial sector greatly contributed to the worst economic crisis since the Great Depression. Regulation isn't a dirty word. It's essential so consumers and businesses can conduct their transactions with assurance that the system is as honest and accountable as possible.

The uncertainty over the loss of privacy and other consumer harms will continue to undermine confidence in the online advertising business. That's why the online ad industry will actually greatly benefit from privacy regulation. Given a new regulatory regime protecting privacy, industry leaders and entrepreneurs will develop new forms of marketing services where data collection and profiling are done in an above-board, consumer-friendly fashion. Consumer and privacy groups pledge to work closely with the subcommittees to help draft a law that balances the protection of consumers with the interests of the online marketing industry.